METHOD AND SYSTEM OF MANAGING CREDIT FOR
THE ELECTRONIC TRADING OF FINANCIAL INSTRUMENTS

FIELD OF THE INVENTION

5   This invention generally relates to computerized brokerage systems and more particularly, to the electronic trading of financial instruments between various counterparties having unilateral or bilateral credit relationships.

BACKGROUND

When financial instruments, such as those listed in Table 1, are traded, the credit

10   worthiness of the opposing counterparty is important because obligations of one or both parties under such financial instruments may extend up to and beyond thirty years. Each of the parties may be exposed to risk based upon the ability of a counterparty to fulfill its obligations. The resulting credit exposure over the life of a contract is potentially an unknown amount. Therefore, trading parties have a significant interest in limiting credit exposure.

15   In a typical "conversational" trading desk scenario in which traders enter and act on orders over the telephone, a credit officer for each trading entity assigns credit lines for each potential counterparty. An intermediary broker is used to match bids and offers between various parties. Once two parties are matched, credit officers for both parties then determine whether to approve the transaction based on the opposing party's credit limit. Alternatively,

20   the broker may maintain a list of which entities each party is willing to trade with, and only match parties who are cleared to deal with one another.

F/X Products
   American and European Options
        Calls
25   Puts
        Risk Reversals and Straddles
        Strangles
   Exotic Options
        Knock-ins/outs
30   Reverse knock ins/outs
   Other Instruments
        Forwards

Fixed Incom   Products
Swaps
Swap spreads (traded with treasury hedge)
All-in rate swaps
5   Spread switches
All-in-rate switches
1-3,3-6,1-6 month LIBOR basis swaps
CP-3 month LIBOR basis swaps
Forward Rate Agreements
10   1/3/6 month LIBOR
FRA Switches
Swaptions
European (payer, receiver, straddle)
Bermudan (payer, receiver, straddle)
15   Bermudan-European Switches (payer, receiver, straddle)
LIBOR Cap/Floor, Straddle
LIBOR Digital Cap/Floor
Convexity Products
Cap/Floor, Straddle (CMS/CMT 2, 5, 10, 30 year tenors)
20   Rolling Spread Locks against a spot hedge
Rolling Spread Locks quoted outright
Equity Index Products
American and European Options
Calls
25   Puts
Straddles

Table 1

A number of systems have been developed which attempt to automate the trading

process and provide credit controls. For example, U.S. Patent No. 6,014,627 describes an

30 anonymous trading system which identifies the best bids and offers from those counterparties

with which each party is eligible to trade. The system pre-screens each bid and offer for a

particular type of financial instrument for compatibility with credit information to calculate a

best price (the "dealable" price), for each entity dealing with the particular financial instrument.

U.S. Patent No. 5,924,083 describes a distributed trading system for displaying a credit-

35 filtered view of markets for financial instruments based upon credit limits entered by the

trading parties. Each trading entity initially enters credit information which consists of the

amount of credit that the trading entity is willing to extend to other trading entities for one or

more types of trading instruments. Each trading entity may also create group credit limits by

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which the trading entity may limit the amount of credit it is willing to extend to a group of potential counterparties.

PCT Application, No. PCT/US98/21518 describes a credit preference method in an anonymous trading system for screening trades between entities. Three screening methods
5   are described: a binary method in which each entity makes a yes or no determination as to whether or not it will deal with each potential counterparty; a line binary or time limit method in which each entity sets a maximum maturity of contracts for each potential counterparty; and a "complex" method in which each entity specifies a maximum amount it will trade with each counterparty for one or more "maturity bands." The system provides a "complex preference
10 interface" through which a credit administrator for the trading entity can specify for each potential counterparty, the maximum exposure for each maturity band. For example, an entity could specify that for a given counterparty, it "will do up to $100 million out for 5 years, and then only $50 million out from thereafter out to 10 years, and nothing thereafter." In determining appropriate limits, the administrator use a measure of "risk equivalence" (RQ)
15 which is calculated as a function of the potential exposure averaged over a series of time points, weighed by a discount factor.

Although the above systems disclose credit mechanisms for use with trading systems, no known prior art allows an administrator or other authorized user to easily relate credit limits for multiple tenors or instruments. Thus, there exists a need for a method and system of
20 facilitating the use of related credit limits for use with trading systems.

SUMMARY OF THE INVENTION

These and other limitation of the prior art are addressed in the present invention which is a system and method of tracking credit limits between counterparties trading financial
25 instruments on a trading system, where each financial instrument may have one or more tenors associated with it. Each trading party has a set of credit limits associated with each other potential trading party. This includes a credit limit for one or more tenors of each financial instrument to be traded. The tenors are grouped into sets of "buckets," where a single credit limit is applied to all tenors in an individual bucket. A relationship is associated
30 with the credit limits for a first group of buckets wherein credit extended on one of the tenors in

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an individual bucket proportionally reduces the available credit for the other buckets, and therefore the credit limit on each tenor in the buckets. When a trade is entered into between a party and a given counterparty for a given tenor, the credit limit for the bucket associated with the tenor is reduced by the amount of the trade and the credit limits on the related buckets are

5   proportionally reduced. In a preferred embodiment, the credit limit of each bucket is reduced in proportion to an initial assigned credit limit.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 is a schematic diagram of exemplary credit relationships formed between trading organizations in accordance with the present invention;

10   Figure 2 is a flow chart of a preferred process for tracking credit limits in accordance with the invention;

Figure 3 is a flow chart of a method for calculating proportional draw downs and currently available limits in accordance with the present invention;

Figure 4 shows an exemplary user interface for selecting trading groups in accordance

15   with the present invention;

Figures 5A and 5B show an exemplary user interface for specifying draw down proportions for various tenors for financial instruments in accordance with the present invention;

Figure 6 shows an exemplary user interface for setting eligibility as well as available

20   credit multipliers for a plurality of counterparties in accordance with the present invention;

Figure 7 shows an exemplary user interface for customizing proportional draw downs for individual institutions;

Figure 8 shows an exemplary user interface for globally selecting buckets of financial instruments;

25   Figure 9 shows an exemplary user interface for setting buckets for an individual institution;

Figure 10 shows an exemplary trader screen including credit relationship status information for each bid and offer; and

Figure 11 is a schematic of an exemplary computer network implementing the disclosed

30   invention.

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DETAILED DESCRIPTION OF THE INVENTION

With reference to Figure 1, a typical trading and credit scenario is described. Trades of financial instruments are typically performed between trading groups (10, 12, 14, 16, 18, 20). Each trading group typically trades one or more types of financial instruments. Each trading

5   group also typically includes one or more individual traders. Credit relationships are typically established between trading groups and legal organizations (22, 24, 26 and 28). Alternatively, credit relationships may be formed between trading groups and parent companies of the legal organizations (shown as institutions 30, 32); or between any combination of trading groups, organizations, institutions, or other entity. Accordingly, the term "party" or "counterparty" shall

10   refer to any institution, organization, trading group, or other entity which has a unilateral or bilateral credit relationship with another entity. In a typical scenario, a credit officer or someone with policy setting power for a party will define the amount of credit the party is willing to extend to each potential counterparty.

The invention is most suited to instruments that include on-going obligations, such as

15   those listed in Table 1, but can also be applied to other instruments, such as stocks and bonds where a party's only significant risk is settlement. Moreover, the invention also applies to contracts based upon the exchange of any commodity, such as contracts for the exchange of bandwidth, real estate, electricity, processing power, freight transportation, etc. Thus the term "financial instruments" as used herein includes contracts based upon such commodities or

20   services.

With reference to Figure 2, an overview of the system for entering and processing credit limits on buckets is described. For each potential counterparty (50), the system is initialized, i.e. α is set to zero (51), and the credit officer or other authorized user (referred to herein as an "administrator" or "credit officer") defines a Proportional Draw Down limit (52) for each

25   bucket by tenor M_i^0 for buckets (i = 1...N). The administrator may combine several tenors or financial instruments into a single bucket. Thus, for example, the administrator may choose to set up three buckets for a given financial instrument, such as a two year tenor, a five year tenor and a seven year tenor. Any tenor for this financial instrument would then be assigned to one of these buckets based on its lifespan. In a preferred embodiment, any tenor of the

30   financial instrument of two years or less would be assigned to the two year bucket; any tenor

of the financial instrument of greater than two years but less than or equal to five years would be assigned to the five year bucket; and any tenor of the financial instrument of greater than five years but less than or equal to seven years would be assigned to the seven year bucket. Any tenor of the financial instrument of greater than seven years could not be traded unless

5 the administrator chose to create an additional bucket of a longer tenor. In an alternate embodiment, tenors of greater than the maximum bucket tenor are given a "maybe" trading status, as described further below. The administrator further decides how buckets are related. For example, all tenors of a given financial instrument are typically related. In addition, the administrator may also decide to group different financial instruments, such as swaps and

10 options, together, such that credit drawn down for swaps will reduce the credit available for the options.

The Proportional Draw Down for each bucket represents the amount of trading that could potentially be done (on a notional basis) in a single bucket that would completely exhaust the entire credit limit of a given counterparty. Combined, the Proportional Draw

15 Downs for a group of buckets give the proportional relationship between trades done in different buckets. In one embodiment of the invention, the administrator may further define an Overriding Credit Limit (54) for each bucket O_i^0 for buckets (i = 1...N) which is an additional constraint on credit that further limits the trading in any bucket. The Overriding Credit Limit is the maximum that may be drawn down from a given bucket. The Current Available credit limit

20 at any given time for each bucket is then the minimum of the Proportional Draw Down and the Overriding Credit Limit. In one embodiment, the administrator may further specify a minimum trade amount (CL_{min}) below which trades will be allowed. This may be a global variable or assigned individually for each entity. Optionally, this minimum is simply set to zero.

The Proportional Draw Downs create a relationship between the various buckets for the

25 various instruments, such that the trading in any instrument in any single bucket will have an effect on all of the instruments in any related buckets. While the present invention is described in terms of Proportional Draw Downs, other methods of specifying the relationship between tenors of financial instruments are within the scope of the invention and will be apparent to those of skill in the art based on the specification herein. These alternate

30 methods include, without limitation, specifying the fractional relationships between buckets.

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Thus, for example, one could specify a credit relationship between ten year, five year, and two year tenors, for a given option, as 1:4; 1:2; and 1:1. Once the administrator defines the Proportional Draw Downs, and, optionally, the Overriding Credit Limits, the system calculates (55) initial Currently Available Limits for each bucket C_i^0 for buckets (i = 1...N). The initial

5   Currently Available Limits are preferably calculated according to the formula:

$$C_i^0 = \max (\min [M_i^0, O_i^0], CL_{min}).$$

As shown in Figure 2, after the Proportional Draw Down Limits and Overriding Limits are defined, and the initial Currently Available Limits are calculated, the system is ready to process trades (56). A preferred methodology utilizing the concept of Proportional Draw

10   Downs along with Overriding Limits to track Current Available Limits is now described:

        Suppose there are N Buckets: 1...N.

        Suppose that there have been α (α = 0, 1, 2, ...) trades done so far.

        Denote the values of the Proportional Draw Downs for the N buckets after α trades as M_i^α, i = 1...N, the values of the Overriding Limits as O_i^α, i = 1...N, and the

15   values of the Current Available Limits as C_i^α, i = 1...N.

        Suppose that the α + 1 trade is done (56) in the kth bucket with size X_k.

        In one embodiment of the invention, both parties to a trade will draw down the credit limits available to the opposing party for any trade. In another embodiment, trades for certain types of instruments having non-symmetrical credit risks will only draw down against the credit

20   limits for one of the parties. For example, the buyer of an option would want to reduce the credit limit of the party it is buying the option from, whereas the seller of an option may not want to reduce the credit limit of the party it is selling the option to. In this embodiment, the system will determine whether to reduce one or both parties respective credit limits based on the nature of the instrument and whether the party is a buyer or a seller.

25   The system calculates (58) (for at least one counterparty) new values for the Proportional Draw Downs as:

$$M_i^{\alpha + 1} = M_i^\alpha - (M_i^\alpha / M_k^\alpha) * X_k. \qquad (1)$$

        The system calculates (60) (for at least one counterparty) new values for the Overriding Limits as:

30        $$O_i^{\alpha + 1} = O_i^\alpha - \delta_{ik} * X_k. \qquad (2)$$

where δ_{ik} is the well known Kronecker Delta and has a value equal to 0 if i is not equal to k and a value equal to 1 if i equals k.

The system calculates (62) (for at least one counterparty) new values for the Current Available Limits as:

5
$$C_i^{\alpha + 1} = \max (\min [M_i^{\alpha + 1}, O_i^{\alpha + 1}], CL_{min}). \qquad (3)$$

where max is the maximum function which compares the two arguments and returns their maximum, and min is the minimum function which compares its two arguments and returns their minimum.

As noted above, in one embodiment CL_{min} is automatically set by the system to zero.
10 This ensures that the counterparty's credit limit will never be less than zero. However, CL_{min} may be changed by an authorized user. Finally, α is incremented (63)

For the case of a typical trading desk authorized to trade swaps and options the following examples will help to understand the invention. Assume the trading desk's credit officer has specified the values for Proportional Draw Downs and Overriding Limits as shown
15 in the first two rows of Table 2 and Table 3 below.
Initially no trades have taken place (i.e. $\alpha = 0$).

SWAPS	2 Year ("bucket 1")	5 Year ("bucket 2")	10 Year ("bucket 3")
Proportional Draw Down ($MM)	400	200	100
Overriding Limit ($MM)	300	100	80
Current Available Limit ($MM)	300	100	80

Table 2

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OPTIONS	2 Year ("bucket 4")	5 Year ("bucket 5")	10 Year ("bucket 6")
Proportional Draw Down ($MM)	800	400	200
Overriding Limit ($MM)	500	400	200
Current Available Limit ($MM)	500	400	200

30   **Tabl 3**

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If we let the two year bucket for Swaps be bucket 1; the five year bucket for Swaps be bucket 2; the 10 year bucket for Swaps be bucket 3; the two year bucket for Options be bucket 4; the five year bucket for Options be bucket 5; and the ten year bucket for Options be bucket 6; the values for Proportional Draw Downs, Overriding Limits, and Current Available Limits are

5   as follows:

$$M_1^0 = 400, M_2^0 = 200, M_3^0 = 100, M_4^0 = 800, M_5^0 = 400, M_4^0 = 200;$$

$$O_1^0 = 300, O_2^0 = 100, O_3^0 = 80, O_4^0 = 500, O_5^0 = 400, O_4^0 = 200;$$

$$C_1^0 = 300, C_2^0 = 100, C_3^0 = 80, C_4^0 = 500, C_5^0 = 400, C_4^0 = 200.$$

Now assume a trade takes place consisting of $40 MM of 2 year Swaps. The value for

10 the trade size is:

$$X_1 = 40.$$

The new values (i.e. the α + 1 values) for the Proportional Draw Downs, Overriding Limits, and Current Available Limits can then be calculated using equations (1), (2), and (3) respectively.

15 For example:

$$M_1^1 = 400 - (400/400) * 40 = 360;$$

$$O_1^1 = 300 - 1 * 40 = 260;$$

$$C_1^1 = \max(\min(360,260),0) = 260.$$

Tables 2 and 3 can then be updated with the new values as shown in Tables 4 and 5,

20 respectively.

SWAPS	2 Year	5 Year	10 Year
Proportional Draw Down ($MM)	360	180	90
Overriding Limit ($MM)	260	100	80
Current Available Limit ($MM)	260	100	80

25   **Table 4**

OPTIONS	2 Year	5 Year	10 Year
Proportional Draw Down ($MM)	720	360	180
Overriding Limit ($MM)	500	400	200
Current Available Limit ($MM)	500	360	180

Tabl 5

In a more general embodiment of the invention, Overriding Limits are not required. In essence, this is a special case of the above methodology in that it is equivalent to setting the Overriding Limit to the Proportional Draw Down for each bucket. The mathematical model for
5 this case is as follows:

Suppose there are N Buckets: 1…N.

Suppose that there have been α (α = 0, 1, 2, …) trades done so far.

Denote the values of the Proportional Draw Downs for the N buckets as M_i, i = 1…N.

10 Denote the values of the Current Available Limits after α trades as C_i^α, i = 1…N.

Suppose that the α + 1 trade is done in the kth bucket with size X_k.

The new values for the Current Available Limits are

$$C_i^{\alpha + 1} = \max [C_i^\alpha - (M_i / M_k) * X_k, , CL_{min}]. \tag{4}$$

Equation (4) can be employed in a similar manner to equation (3) above to continually
15 track available credit. As above, in one embodiment CL_{min} is automatically set to zero, but may, alternatively, be administrated as noted above.

In one embodiment of the invention, the system implements the above procedure by normalizing the credit limits in buckets 1…N to the credit limit for a single bucket, called a Normalized Total Credit (NTC). The buckets are typically normalized to the maximum tenor,
20 for example, the swaps of Table 2 above would be normalized to $100 million ten year swaps.

Thus, for example the conversion ratios (CR_i) for the two, five, and ten year swaps of Table 2 could be expressed as: .25, .5, and 1, respectively, where NTC is the normalized total credit ($100 million) with respect to the ten year swap.

With reference to Figure 3, a preferred method for calculating credit limits using NTC is
25 now discussed. Once the Proportional Draw Downs and Overriding Credit Limits have been entered, the NTC must be set (70). As noted above, this is typically set equal to the Proportional Draw Down of the maximum tenor for at least one instrument, but may be set equal to any draw down limit or any arbitrary value. The conversion ratios (CR_i) are then calculated (72) for each bucket as the ratio of the NTC over credit limit for that bucket. When

a signal indicating the $\alpha +1$ trade has occurred for a tenor falling in the kth bucket for amount X_k, is being entered into is received (74), the system recalculates (76) the NTC as:

$$NTC^{\alpha+1} = NTC^{\alpha} - (X_k * CR_i).$$

5

Proportional Draw Downs for each bucket (M_i) are calculated (78) as:

$$M_i^{\alpha+1} = NTC^{\alpha+1} * 1 / CR_i.$$

10   Overriding Credit Limits (O_i) are calculated (80) as:

$$O_i^{\alpha+1} = O_i^{\alpha-1} - \delta_{ik} * X_k.$$

Current Available Limits ($C_i{}^{\alpha}$) are calculated (82) as:

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$$C_i^{\alpha+1} = max\ (min\ [M_i^{\alpha+1},\ O_i^{\alpha+1}],\ CL_{min}).$$

Continuing the example from Table 2 and 3 above, Tables 6 and 7 show initial Proportional Draw Downs of 400, 200, and 100 million, and Overriding Credit Limits of 300,

20 100, and 80 million for 2, 5 and 10 year swaps; and Proportional Draw Downs of 800, 400, and 200 million and Overriding Credit Limits of 500, 400, and 200 for 2, 5, and 10 year options, respectively.

SWAPS	2 Year	5 Year	10 Year
Proportional Draw Down ($MM)	400	200	100
Conversion Ratio	CR: .25	CR: .5	CR: 1
Overriding Limit ($MM)	300	100	80
Current Available Limit ($MM)	300	100	80

30   **Table 6**

OPTIONS	2 Year	5 Year	10 Year
Proportional Draw Down ($MM) Conversion Ratio	800 CR: .125	400 CR: .25	200 CR: .5

Overriding Credit Limit ($MM)	500	400	200
Current Available Limit ($MM)	500	400	200

Table 7

5   Assume forty million dollars of two year swaps, sixty-five million dollars of ten year swaps, as well as eighty million dollars of two year options are traded. NTC is calculated as follows:

$$NTC = 100 - (40 \times .25) - (65 \times 1) - (80 \times .125) = 15.$$

10   The new available limits, as shown in Tables 8 and 9 are calculated being 30 for the five year swaps or 2 times the ten year NTC, 60 for the two year swap or 4 times the ten year NTC, and the new values for the options are 2 times the ten year NTC or 30 for the ten year options, the five year options maximum is 60 or 4 times the ten year NTC, and the new two year options limit is 8 times the ten year NTC or 120. Had any of the overriding credit limits

15   been less than the calculated available limits, those values would have been used. Also, tables 8 and 9 have been updated to reflect updated Overriding Credit Limits.

SWAPS	2 Year	5 Year	10 Year
Proportional Draw Down ($MM)	60	30	15
Overriding Credit Limit ($MM)	260	100	15
Current Available Limit ($MM)	60	30	15

Table 8

OPTIONS	2 Year	5 Year	10 Year
Proportional Draw Down ($MM)	120	60	30
Overriding Credit Limit ($MM)	420	400	200
Current Available Limit ($MM)	120	60	30

Table 9

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With reference to Figures 4 - 9, a preferred interface for managing credit limits will now be described. The credit officer, administrator, or other authorized user selects from a list of trading groups (shown as 112, 114, 116, 118, 120, 122, 124 and 126). The credit officer will select one or more of these trading groups and set trading properties for the selected group or

5   groups. The credit officer enters the properties screen by selecting the properties link (128). Overriding Credit Limits may be specified using a similar interface (not shown) for embodiments including overriding credit limits.

Figure 5A shows a draw down proportion screen (tab 150), including a draw down matrix (128), having three instruments, swaps (130), swaptions (132) and cap/floors (134).

10   Additional instruments traded by the specific trading group, in this example, the USD Swaps and Options group, may be available by scrolling down the screen (not shown). In this example, four buckets for each instrument are displayed, two year (140), five year (142), seven year (144) and ten year (146). As noted above, each tenor for any listed instrument will be assigned by the system to one of the buckets for that instrument. The credit officer will

15   enter the Proportional Draw Downs for each bucket for each instrument. For example, in Figure 5A, the officer has entered 1600 for two year swaps, 1000 for five year swaps, etc. As shown in Figures 8 and 9, the credit officer can redefine the number, and tenor, of buckets, either globally (Figure 8) or on an individual trading group (Figure 9) basis.

As shown by the horizontal and vertical "=" symbols in the draw down matrix (128), the

20   Proportional Draw Downs for each tenor (140, 142, 144 and 146) of the instruments (130, 132 and 134) will be related. Thus, 500 in ten year swaps will be equivalent in draw down of credit to 1500 in two year cap/floors. As shown in Figure 5B, in one embodiment, the credit administrator may specify that certain instruments and/or tenors are not related, by turning off the horizontal and/or vertical "=" symbols. For example, in Figure 5B, the credit administrator

25   has created two sets of buckets, one for USD swaps and USD swaptions, and a second for USD Cap/Floor. Thus, trading in the USD Cap/Floor instruments will not effect credit levels in the USD swaps and USD swaptions set of buckets. Likewise, trading in USD swaps or USD swaptions will not effect the credit levels in the USD Cap/Floor buckets.

Any instrument with a tenor not falling within a specific bucket will preferably be

30   automatically grouped to the next higher bucket. Thus, for the example shown in Figure 5A,

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trading a six year swap will be the same as trading a seven year swap for credit purposes. In another embodiment, any instrument with a tenor not falling within a bucket will be allocated among the next higher and next lower buckets by mathematical interpolation. For the example shown in Figure 5A, a trade in a six year swap in this embodiment may have one half of its

5 notational size drawn down from the five year bucket and one half drawn down to the seven year bucket.

Figure 6 shows an eligibility screen (tab 152), including an eligibility matrix (160), having a list of eligible entities (162), a binary eligibility list (164) and a draw down multiple (166). A trading group profile specifies which entities will be included in the eligible institution list (162).

10 The first time the credit officer accesses the eligibility screen (tab 152), eligibility is defaulted to yes for all entities in the eligible institution list and the multiplier (166) is defaulted to 1.0. Any entities not included in the list will be assumed to be eligible, although their multiplier will be set to zero. Thus, as described below, new institutions will be given "maybe" status until the administrator further specifies credit status for that institution. The credit officer may modify

15 eligibility for any specific institution by clicking on the binary eligibility list (164). The draw down multiple list allows the credit officer to easily multiply the drawn down matrix (128) set above in Figure 5A by a multiplication factor. For example, Morgan Guarantee Trust has been assigned a multiple of 2.0 in Figure 6. The system would then multiply each entry in the draw down matrix (128) of Figure 5A by a factor of 2.0. For example, the two, five, seven and ten

20 year limits for USD Swaps for Morgan Guarantee Trust would be set to 3200, 2000, 1600 and 1000 for two, five, seven and ten year buckets, respectively.

Figure 7 shows a customization screen (tab 154), including a customizable draw down matrix (170) and an available credit limit matrix (172) for each trading institution. The credit officer may individually set the draw down limits for each bucket and instrument for each

25 trading institution. The screen allows the credit officer to scroll down to additional trading entities. Users without credit setting power may view this screen to see the available credit limits for each institution, but preferably, are not allowed to modify credit limits.

As shown in Figure 10, credit relationships in accordance with the present invention may be displayed on trader screens such that the credit relationship for individual trades may

30 be displayed while keeping the identity of the potential trading counterparty anonymous. In a

preferred embodiment, individual bids and offers are displayed with an indication, preferably

specific colors, corresponding to the potential credit relationship of the counterparty. Bids and

offers on which credit is bilaterally approved according to the credit relationship scheme are

indicated by a first color, preferably green (shown as standard font text in Figure 10). Bids and

5   offers having a "maybe" status as to credit are indicated by a second color, preferably yellow

(shown as underlined text in Figure 10). A bid or offer will have a "maybe" status when credit

was initially assigned by either party to the potential counterparty but has been used up, at

least for the specific tenor, through one or more trades. These are considered "maybe" in the

preferred embodiment because credit officers typically spread credit over a variety of systems

10   and are often willing to further extend credit on one or more systems to a specific

counterparty, particularly when the credit for the given counterparty has been used up on one

system but not another. Alternately, "maybe" status for a potential counterparty would arise

where the initial proportional draw downs or overriding credit limits have been set to zero. Bids

and offers in which one or both parties have a "no" status are indicated with a third color,

15   preferably red (shown as bold/italic in Figure 10). This occurs when the credit officer for either

party indicates they will not trade with the entity associated with the bid and/or offer. Traders

using this system will immediately know the credit status, "yes," "no," or "maybe," of any bid or

offer on the system before attempting to enter into a trade.

The system is preferably implemented utilizing a computer network as disclosed in

20   Figure 11. Each trader station (250, 251 and 252) is connected to the server (254) through

the network (255). The network (255) is preferably a private network connected through any

number of means, such as T1 lines, digital subscriber lines, cable modems, satellite links, or

other available connection means. One or more trader stations for a trade group may be

coupled via a local area network (253). A credit officer station (256) also is preferably coupled

25   via the same local area network (253) to server (254). Alternatively, trader stations (250, 251

and 252) may be coupled to server (254) through any of a number of means, such as via a

public network such as the Internet or via a virtual private network. The system preferably

utilizes a client-server architecture in which trader stations (250, 251 and 252) execute a thin-

client written in Java to communicate with the server (254). In an alternate embodiment, the

30   server (254) acts as a web server and communicates with trader stations (250, 251 and 252)

using a page description language, such as HTML. In this embodiment, traders interact with server (254) using an HTML compatible browser (e.g., Netscape Navigator® or Microsoft Internet Explorer®).

Although the present invention was discussed in terms of certain preferred

5 embodiments, the description is not limited to such embodiments. Rather, the invention includes other embodiments including those apparent to a person of ordinary skill in the art. Thus, the scope of the invention should not be limited by the preceding description but should be ascertained by reference to claims that follow.

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